

October 11, 2002

MEMORANDUM TO NATIONAL SCIENCE BOARD MEMBERS

SUBJECT: Preliminary Report of October 9, 10, 2002 Meeting

The major actions of the Board at its 370th meeting on October 9, 10, 2002, are summarized for the information of those members and consultants absent and as a reminder to those present.

1. Board Actions

The Board approved a slate of candidates for the NSB class of 2010 for forwarding to the White House.

2. Awards

The Board approved the following award:

Amount not
to exceed

Computer and Information Science and Engineering

Division of Advanced Computational Research and Infrastructure

Extensible Terascale Facility

Supplements to Cooperative Agreements with

The University of Illinois at Urbana-Champaign,

\$15,505,000

The University of California-San Diego, and

\$13,915,000

The Mellon Pitt Carnegie Corporation

\$12,990,000

(NSB-02-68)

for a total \$42,500,000

for 12 months

3. NSB Committees

(Committee summaries are provided by executive secretaries.)

a. Executive Committee (EC)

Dr. Colwell notified members of the Executive Committee that the recruitment process for selection of the position of Executive Officer has begun and she distributed copies of the vacancy announcement.

Dr. Washington began his report with a discussion of his recent visits to Members of Congress and their senior staff. He noted that great support was expressed for the work of the Foundation and that the visits were quite productive. Other items discussed by Dr. Washington included his interest in continuing to make the meetings of the Board as open as possible.

Dr. Colwell led a discussion of the status of congressional action on the Foundation's FY 2003 budget and distributed copies of the actions taken on October 7, 2002 by the House Appropriations Committee on VA, HUD and Independent agencies.

b. Audit & Oversight (A&O)

Regular

The committee heard the following reports: an update to NSF Response to the FY2001 audit Management Letter; highlights of the Government Information Security Reform Act [GISRA] Report; and an update on policy/implementation regarding possible changes to cost sharing approaches. The committee moved to bring recommendations for clarifications to the 1999 NSB cost sharing policy to the full Board in November. The committee also heard about the inaugural meeting of the Government Performance and Results Act Performance Assessment Advisory Committee, held in September, and an update on the status of NSF's scores in the President's Management Agenda Scorecard.

Supervisory

The committee heard presentations from the OIG staff on: how audits are selected for inclusion in the annual audit plan; the audit process and an example of how the process unfolded during a recent audit of NSF's travel card program and; a research misconduct case.

c. Programs and Plans (CPP)

The Committee on Programs and Plans (CPP) met via conference call on September 27 and considered additional information on the Extensible Terascale Facility. The committee voted to recommend the awards to the National Science Board for approval.

CPP met October 10 and had reports and discussions on several topics.

The Committee considered the revised draft report from the CPP Infrastructure Task Force. Discussion focused on the Executive Summary, containing the report's principle recommendations. CPP also discussed plans to provide the draft report to the full NSB for comment, followed by posting the draft on the NSF web site for a period of public comment.

A report was provided on the recent site visit review of the National High Magnetic Field Laboratory (NHMFL). When CPP approved the NHMFL award in October 2000, it requested such a review after two years. The committee noted good progress in some challenging areas of magnet R&D and in the use of high magnetic fields to conduct research.

A briefing was presented on operations support for the Gemini Observatory, the status of the South American partners (Argentina, Brazil and Chile), and contingency planning that is taking place.

CPP also heard a report on experience with the NSB Policy on Competition, Recompensation and Renewal of Awards, a policy formalized in a Board Resolution and Statement in 1997. The committee was provided with a range of case studies on how competition is addressed for different categories of awards -- individual investigators, large groups, centers, facilities.

CPP heard a brief summary of the discussion in the Committee on Strategy and Budget, of options for major facility priority setting by the NSB. It was noted that this topic will be discussed further in November.

There was also a report from the Polar Issues Subcommittee, including a video from a CBS News report on research in the Arctic.

d. CPP Subcommittee on Polar Issues (PI)

Staff reported on new personnel in the Office of Polar Programs; Western Arctic Shelf-Basin Interactions, a science project to understand the physical and biogeochemical processes linking Arctic shelves, slopes, and deep basins within the context of global change; geological drilling in Antarctica to understand paleoclimate, including cycles and variations in ice sheet volume; South Pole Station modernization progress to date and plans for the coming season.

e. CPP Task Force on S&E Infrastructure (INF)

The task force reviewed the first draft of the executive summary of the INF report and suggested a number of editorial changes. In particular, the wording of the first recommendation in the report was discussed because of its future budget implications. The task force agreed to redraft the executive summary and present it for discussion at the CPP meeting and NSF closed session meeting on the following day. It was agreed that publishing the report as soon as possible will benefit NSF and the S&E community. The plan is to send the draft report to the full Board within the next week, put the draft on the web for public comment before the end of the month, and seek NSB approval of the report at the next meeting.

f. Education and Human Resources (EHR)

The EHR Committee meeting began with reports from the Science and Engineering Indicators Subcommittee and the Task Force on National Workforce Policies. Next, Dr. Judith Ramaley described her plans for an evaluation of the EHR Portfolio vis-à-vis the NSB's recent report, *The Road to Excellence*. Dr. James Lightbourne of the EHR staff followed with an update on the activities of NSF's internal working group on the Workforce for the 21st Century Priority Area. The working group has completed an inventory of current workforce development activities and he described several examples of the wide-ranging activities supported in various parts of the Foundation. Dr. Mary Clutter briefed the committee on current educational and diversity

activities that are supported in the Biological Sciences Directorate and noted that diversity and curriculum reform will be emphasized in the future. Dr. Lightbourne next reported on the recent activities of an internal NSF working group that is looking into the nature of the postdoctoral experience in science and engineering disciplines. In the future they plan to explore what, if any, federal policies should be considered regarding postdoctoral fellows. The meeting finished with a brief executive session.

g. EHR Subcommittee on Science and Engineering Indicators (SEI)

The subcommittee and SRS staff discussed thematic outlines of the traditional *Indicators-2004* chapters including: Higher Education in Science and Engineering; Science and Engineering Labor Force; U.S. and International Research and Development; Academic R&D and Selected Outputs; Industry, Technology, and the Global Marketplace; Public Attitudes Toward the Understanding of Science and Technology; and Elementary and Secondary Education. In particular SRS staff briefed the subcommittee on new information, trends, data sources etc., which will be used in the preparation of these chapters. The subcommittee expressed no major concerns with the thematic outlines as presented but did provide several suggestions for enhancements such as providing more coverage of environmental science and engineering issues in several of the chapters.

h. EHR Subcommittee on National Workforce Policies for S&E (NWP)

The meeting of the Task Force on National Workforce Policies for Science and Engineering was a working session on the recommendations to be made in the Task Force report. The recommendations will guide national policy toward the goal of drawing more US citizens into careers in science and engineering, while continuing to compete globally for scientific talent. The Task Force discussed a draft of critical issues and recommended actions to focus primarily on preparing our S&E workforce through formal education -- precollege through graduate-- and on issues of global engagement and workforce dynamics. The goal is a draft report for consideration by the EHR Committee at the November Board meeting.

i. Committee on Strategy and Budget (CSB)

Dr. Pamela Ferguson, Vice Chair of CSB, chaired the meeting. The CSB, in consultation with CPP, continued discussions of congressional concerns with the Foundation's prioritization for funding of new major research facilities. Dr. Joseph Bordogna and Dr. Anita Jones presented the committee with options for changing NSF and Board policy guidelines for approving such projects. Further discussion of these options is expected at future NSB meetings.

Dr. Colwell briefed the committee on the plans to revise the Foundation's GPRA Strategic Plan. The Director presented for CSB consideration an initial set of long range issues that NSF believes are driving S&E research and education. NSF will be working with CSB in the upcoming months to flesh out these drivers as the revised plan is being developed.

The committee has begun a process of following up on recommendation contained in recent NSB reports to determine to what extent the Board's recommendations have been implemented. As part of this review, Dr. Margaret Leinen followed up an earlier briefing to the committee on the Foundation's progress in securing increased funding for environmental research, pursuant to recommendations contained in the NSB's February 2000 report "Environmental Science & Engineering in the 21st Century." The committee intends to review other NSB-issued reports in upcoming Board meetings.

Gerard R. Glaser
Acting Executive Officer